river

Resourcing your own macroinvertebrate sampling kit

To borrow a macroinvertebrate sampling kit <u>contact your regional River Detectives</u> <u>coordinator</u> to make a booking and arrange pick up / delivery.

To set up your own macroinvertebrate kit you'll require;

** Most equipment is cheap and readily available. The best net and trays come at a cost. Maybe you could apply for a grant to obtain these items?

A sampling net. A specialist net with very fine mesh is recommended. A large net for use by adults can be purchased from Embrace Ecology's <u>Waterbug Shop</u> or you can purchase a set of smaller <u>student nets</u>. The best samples are taken with heavy duty nets and a vigorous action so we usually use a net purchased from Westlab. They come in three components; <u>the frame</u>, the <u>net itself</u> and the <u>extendable pole</u>.

Please note we do not recommend entering the water to collect your sample so kick nets are not advised.

If on a tight budget, you can make your own scoop net with these <u>instructions</u> (mesh must be fine).

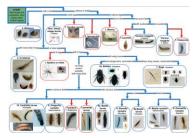
- Good heavy duty buckets with lids for holding and transporting sample water (two buckets is plenty for a class activity)
- Shallow trays (1 per 4 students works well). White trays give the best contrasting background to the bugs. They can be purchased from Embrace Ecology's <u>Waterbug Shop</u> or from <u>Westlab</u>.

If on a tight budget, you can use your own shallow clear plastic tubs with laminated white paper underneath.

- White ice cube trays (1 or 2 per sorting tray works well)
- White spoons (1 per student). White is best to highlight the bugs although plastic spoons are hard to come by these days and we encourage a planet-friendlier option if possible.
- Pipettes for sucking up small bugs (not essential as spoons will do they tend to become water pistols with students!) We do not recommend using tweezers as you might see in some instructional videos.
- Magnifying glasses / three-way bug viewers from your favourite educational supplier.
 You could also invest in traditional microscopes, USB microscopes or macro lenses for smartphones / ipads if you want to get fancy. This can help you show bugs on a big screen to the whole class / take macro photos.
- Waterbug identification charts/guides (2 per tray);
 - Simple ID chart printed at A3 size and laminated (suitable for all but particularly early childhood, primary)



 Simple key chart printed at A3 size and laminated (suitable for upper primary and secondary students)



- Waterbug data sheet (1 per student or sampling tray group) for recording bugs, calculating your score and rating the health of your waterway OR data can be put straight into the River Detectives online portal (login required).
- You may also want to purchase a large plastic tub for housing the equipment at your school.

Other optional waterbug identification tools;

- o <u>Advanced key booklet</u> printed (suitable for upper secondary students and adults)
- The Waterbug App (free for your device) to use in the classroom or out in the field for keying out species digitally
- Interactive <u>Waterbug flip chart</u> on the River Detectives website (not all species featured).

For all other support in running a sampling sessions with students, collecting a sample, teaching/learning about waterbugs, identifying bugs see the publicly accessible Resource River Bank tab (Waterbug topic) of the River Detectives website www.riverdetectives.net.au

Extra resources for registered users only;

- The Secret Life of Waterbugs webinar' can be found at the <u>Let's Test and Record tab</u> (login required).
- o A wonderful matrix of cross-curricular, multi-age waterbug activities can be found in the <u>Dive Deeper tab</u> (login required).